

4.13 Properties of Logarithms (Key) odds

1. 0

3. M

5. $\log_a M + \log_a N$

7. $r \log_a M$

9. 7

11. False

13. -13

15. $\log_8 2$

17. 2

19. a-b

21. 3a

23. $1 - \ln x$

25. $2 \log_a u + 3 \log_a v$

27. $3 \log x + \frac{1}{2} \log(x+1) - 2 \log(x-2)$

29. $\log_5 u^3 v^4$

31. $\log \frac{(x+3)(x-1)}{(x+6)(x-2)(x+1)}$

33. 2.771

35. Use calculator graph $y = \frac{\log x}{\log 5}$

37. Hint: Write the right side of the equation as a single logarithm, then use the one-to-one property.